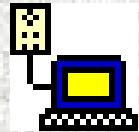




The Indiana University CogBox

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CogBox Overview

- Built on ANL's Java CoG kit.
- GUIs-R-US.
- Easily extensible.
- Designed for interoperability with other CoG projects.



CogBox Metamorphosis : The Early Stages

FileTool interface

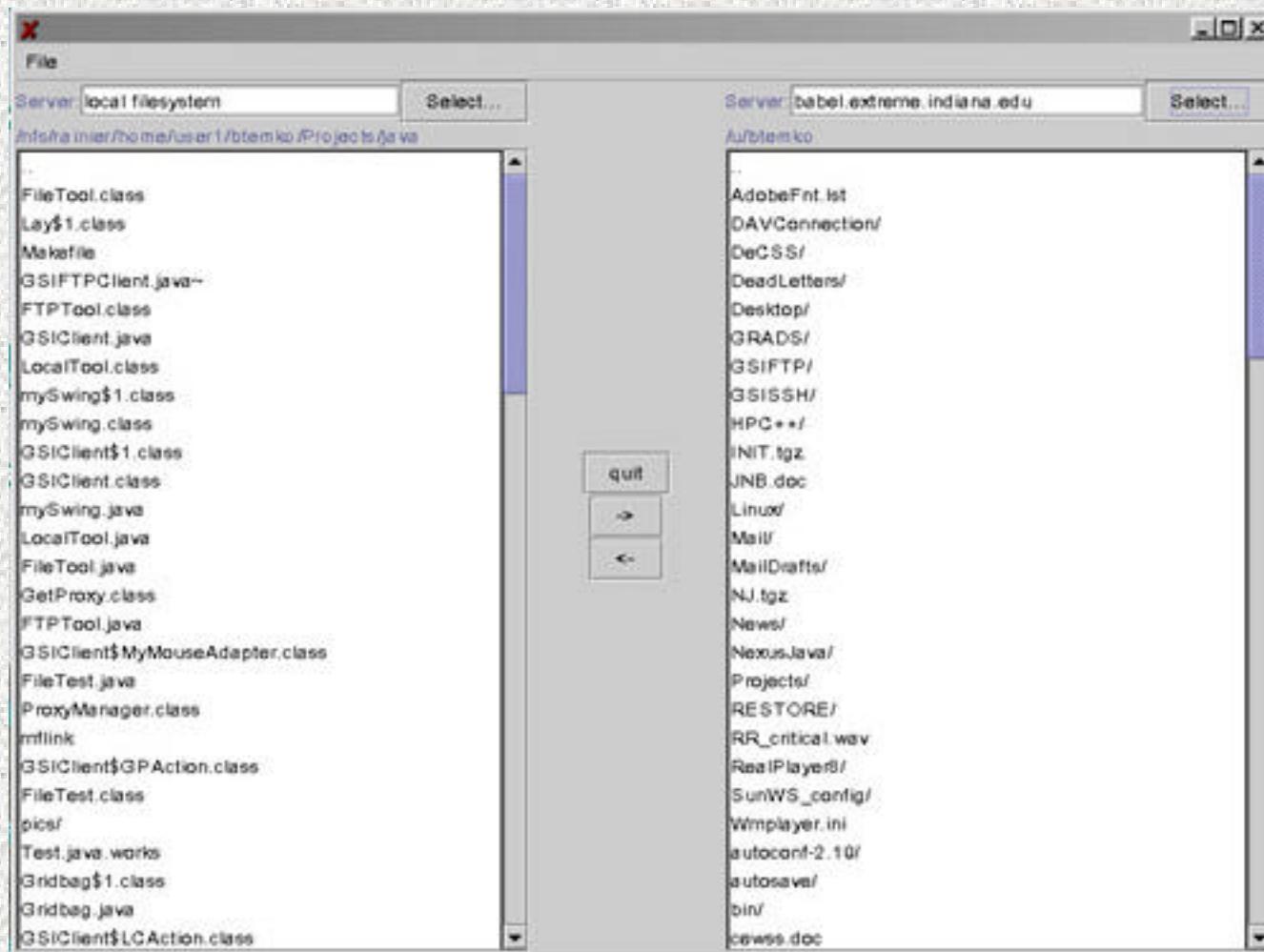
```
public interface FileTool {  
    boolean cd(String dir);  
    String pwd();  
    String[] dir();  
    ...  
    String getLastError();  
}
```

- Common file system operations
- Hide actual mechanism (ftp, gsiftp, etc)



CogBox Metamorphosis : The First Glimpse

Nascent Java Swing GUI on top of FileTool Interface





CogBox Metamorphosis : The CogDesk

- New GUI
- Code Reorganization
- Inappropriate New Name
- New features:
 - Drag and Drop
 - GlobusProxy support
 - MDI (ish) interface



CogBox Metamorphosis : The Final Cockroach

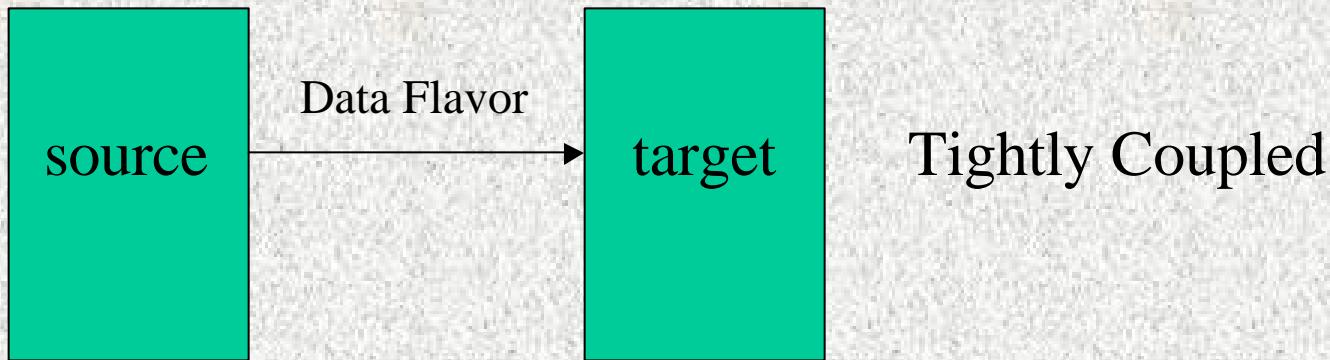


- MyProxy Integration
- RSL Instantiation
- Multiple-Credential Support
- GIIS/GRIS Search Capability
- RSL Editing
- Properly Named



CogBox Architecture

Drag and Drop functionality



Callback interface:

- defines call(Object[] objAr)

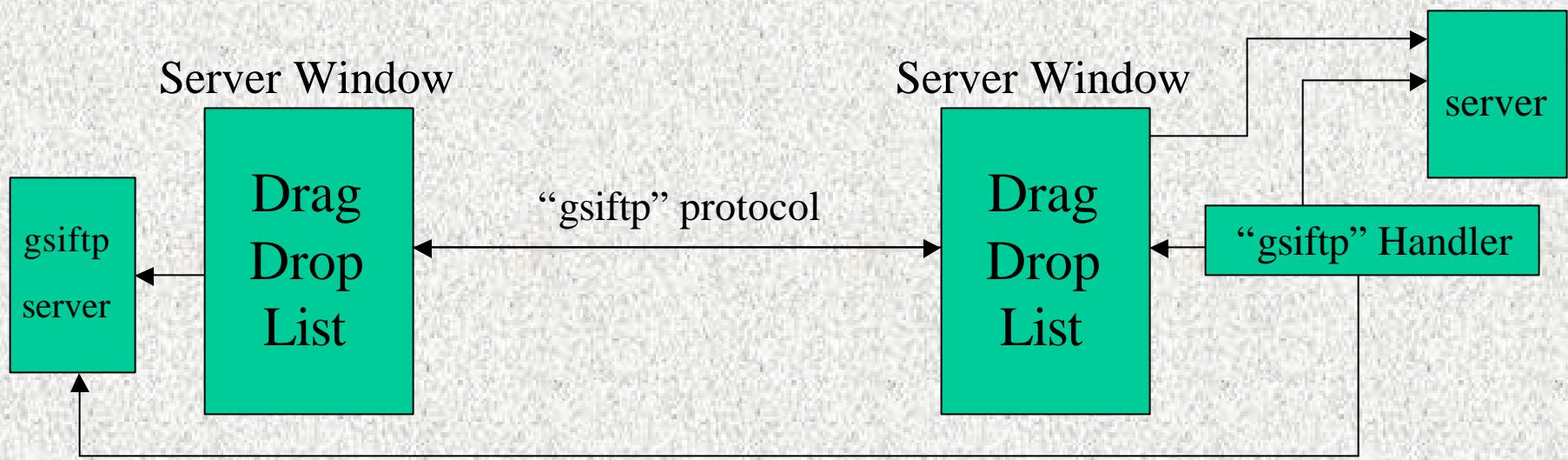
DragDropList:

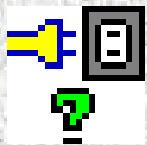
- Extends Swings Jlist
- Implements both DragSource and DropTarget interfaces
- Allows registration of Callbacks so that any GUI component may define its own set of Drop functionality.



CogBox Architecture II

- Every Window is a DragDropList
- Each window type (Server Window, Drop Area, Playpen) trades Object arrays via the DnD DataFlavor.
- objAr[0] defines the “protocol” of the array (“ftp”, “file”, etc)
- If the recipient of the Drop has registered a Handler for that protocol, the data transfer is initiated via the protocol.





What's Next



- Extract DnD functionality to allow any GUI component to generate and receive CoG Data Flavor events.
- WebStart (i.e. the Gannon “airport” scenario): difficulty lies in bootstrapping an initial proxy... potential for MyProxy, but GlobusProxy extensions required.
- Bean-ize.
- Add that *#%*!#\$^-ing “busy” icon...

More Information

- <http://www.extreme.indiana.edu/~btemko/cogbox>